

Claims

1. MHP terminal device (13) comprising
a broadcast interface (15) for receiving a broadcast transport stream (14),
5 whereby broadcast MHP applications (20) to be launched at said MHP terminal
device (13) are transmitted within said broadcast transport stream (14) and are
received via said broadcast interface (15),

characterized by

a local network interface (16) for connecting said MHP terminal device (13) to a
10 local network (7), and for receiving local network transport streams (17)
emanating from other network devices (8) connected to said local network (7),
whereby local network MHP applications (21, 22) to be launched at said MHP
terminal device (13) are transmitted within said local network transport streams
(17) and are received via said local network interface (16).

15 2. MHP terminal device according to claim 1, **characterized in that** said
local network transport stream comprises at least one of AV data, program
specific information, MHP application byte code, service information, and
particularly, said local network transport stream is a data stream according to
20 the MPEG-2 standard.

3. MHP terminal device according to anyone of the preceding claims,
characterized by a resident application that monitors both said broadcast
interface and said local network interface in order to detect MHP applications
25 transmitted within said broadcast transport stream or within said local network
transport stream, and that initiates a loading of said MHP applications.

4. MHP terminal device according to anyone of the preceding claims,
characterized by an application manager running on said MHP terminal device
30 that is responsible for download, maintenance, and life-cycle management of
both said broadcast MHP applications and said local network MHP applications.

5. MHP terminal device according to claim 4, **characterized in that** said
application manager maintains an application database in which each
35 downloaded MHP application is registered.

6. MHP terminal device according to anyone of the preceding claims, **characterized in that** at said MHP terminal device, the received MHP application byte code of said local network MHP applications is passed to a MHP layer, whereby a underlying transport protocol used on said local network is hidden
5 from said MHP layer.
7. MHP terminal device according to anyone of the preceding claims, **characterized in that** said local network is a IEEE 1394 network, a wireless LAN, a wired LAN, a wired or wireless IP network, or any other kind of local
10 network.
8. MHP terminal device according to anyone of the preceding claims, **characterized in that** on said local network, any kind of middleware such as HAVi, UPnP, AV/C is used for exchanging messages and/or commands.
15
9. MHP terminal device according to anyone of the preceding claims, **characterized in that** said MHP terminal device comprises graphical user interface resources, display means, and user input means that enable a user to interact with said local network MHP applications and with said broadcast MHP
20 applications.
10. MHP terminal device according to anyone of the preceding claims, **characterized in that** said local network MHP applications use graphical user interface resources at said MHP terminal device for providing a graphical user
25 interface that enables a user to interact with said local network MHP applications.
11. MHP terminal device according to anyone of the preceding claims, **characterized in that** at said MHP terminal device, a graphical user interface is updated in order to show the availability of said local network MHP applications and/or of said other network devices.
30
12. MHP terminal device according to anyone of the preceding claims, **characterized in that** said local network MHP application is an application for
35 remotely accessing and/or controlling the respective network device from which said local network MHP application has been received.

13. MHP terminal device according to claim 12, **characterized in that** remote access and remote control are effected by transmitting commands from the MHP terminal via the local network to the respective network device.

5 14. MHP terminal device according to anyone of the preceding claims, **characterized in that** said other network devices comprise at least one of a NCAM, an AV content server, a transcoder, a DVB recorder, a home automation server, or any other kind of network device.

10 15. Network device (8, 23), **characterized by**
- storage means for storing local network MHP applications (10), or a means to
generate such MHP applications, that are to be transmitted to a MHP terminal
device (1),
- a local network interface for connecting said network device (8, 23) to a local
15 network (7), and for transmitting a local network transport stream (24) to said
MHP terminal device (1), whereby local network MHP applications (10) to be
launched at said MHP terminal device (1) are transmitted within said local
network transport stream (24), and
- multiplexing means (25) for multiplexing said local network MHP application
20 (10) into said local network transport stream (24).

16. Network device according to claim 15, **characterized by** an object
carousel generator for segmenting said local network MHP applications into a set
of data packets, and for repeatedly transmitting said set of data packets.

25 17. Network device according to claim 15 or 16, **characterized in that** said
local network MHP applications use graphical user interface resources at said
MHP terminal device for providing a graphical user interface that enables a user
to interact with said local network MHP applications.

30 18. Network device according to anyone of claims 15 to 17, **characterized in
that** said local network MHP applications are MHP applications for remotely
accessing and/or controlling said network device from said MHP terminal device.

35 19. Network device according to claim 18, **characterized in that** remote
access and remote control are effected by transmitting commands from said MHP
terminal device via said local network to said network device.

20. Network device according to anyone of claims 15 to 19, **characterized in that** said network device is embedded in said MHP terminal device itself.

21. Network device according to anyone of claims 15 to 20, **characterized in that** said network device either is a NCAM, an AV content server, a transcoder, a DVB recorder, or a home automation server.

22. Local network, comprising a MHP terminal device according to anyone of claims 1 to 14 and at least one network device according to anyone of claims 15 to 21.

23. Method for controlling a network device (33) that is connected to a local network by means of a MHP terminal device (32) connected to the same local network, **characterized by** the following steps:

- 15 - transmitting (36) a local network MHP application together with a local network transport stream from said network device (33) to said MHP terminal device (32);
- launching (39) said local network MHP application at said MHP terminal device (32); and
- 20 - transmitting (41) commands and/or messages via said local network to said network device (33) in order to remotely access and/or control said network device (33).

24. Method according to claim 23, further **characterized by** the following step:
25 monitoring said local network transport stream for MHP applications transmitted within said local network transport stream.

25. Method according to claim 23 or 24, further **characterized by** the following step:
30 downloading local network MHP applications from said local network transport stream.

26. Method according to anyone of claims 23 to 25, further **characterized by** the following step:
35 passing the MHP application byte code received by said MHP terminal device to a MHP layer at said MHP terminal device, whereby a underlying protocol used on said local network is hidden from said MHP layer.

27. Method according to anyone of claims 23 to 26, further **characterized by** the following step:

5 providing a graphical user interface at said MHP terminal device that enables a user to interact with said local network MHP applications.

28. Computer program product, comprising computer program means adapted to perform the method steps as defined in anyone of claims 23 to 27 when said computer program product is executed on a computer, digital signal processor,
10 or the like.

29. Computer readable storage means storing thereon a computer program product according to claim 28.